WHAT IS CLAIMED IS:

1. A planographic printing plate precursor comprising:

a support; and

an image recording layer which is disposed on the support and contains a binder polymer, a polymerization initiator, a polymerizable compound, and an IR absorber,

wherein, upon exposure with a laser beam, an exposed portion of the image recording layer in the vicinity of the surface of the image recording layer is cured, and an exposed portion of the image recording layer in the vicinity of an interface between the image recording layer and the support is not cured.

2. The planographic printing plate precursor of claim 1, wherein the image recording layer has a single-layer structure.

3. A planographic printing plate precursor comprising:

a support; and

an image recording layer which has a two-layer structure including a first layer containing a binder polymer and a second layer containing a binder polymer, a polymerization initiator, a polymerizable compound, and an IR absorber,

wherein:

after being exposed with a laser beam, a developing rate of an unexposed portion of the image recording layer by an alkaline

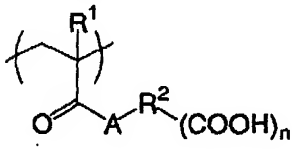
developer having a pH of 10 to 13.5 is 100 nm/sec or more, where the developing rate refers to a value obtained by dividing a film thickness (nm) of the image recording layer by an amount of time (sec) required to develop the image recording layer; and

after being exposed with a laser beam, a permeation rate of the alkaline developer to an exposed portion of the image recording layer is 100 nF/sec or less, where the permeation rate refers to a value indicating a rate of change of electrostatic capacity (F) when the image recording layer is formed on a conductive support, and dipped in the developer.

4. The planographic printing plate precursor of claim 3, wherein the binder polymer in the first layer has an alkali soluble group and a hydrophobic group.

5. The planographic printing plate precursor of claim 3, wherein the binder polymer in the first layer contains a polymer having a repeating structural unit represented by the following general formula (I):

General formula (I)



wherein R^1 represents a hydrogen atom or a methyl group; R^2 represents an (n+1) valent substituted or unsubstituted hydrocarbon group having an alicyclic structure with 3 to 30 carbon atoms in which one or more carbon atoms of R^2 may be replaced by an oxygen atom or a nitrogen atom; A represents an oxygen atom or a NR^3 group in which R^3 represents a hydrogen atom or a substituted or unsubstituted monovalent hydrocarbon group having 1 to 10 carbon atoms; and n represents an integer from 1 to 5.

6. The planographic printing plate precursor of claim 3, wherein the first layer has a thickness after drying in a range of 0.01 to 1.5 μm.

7. The planographic printing plate precursor of claim 5, wherein the binder polymer in the second layer has a repeating structural unit represented by general formula (I).

8. The planographic printing plate precursor of claim 3, wherein the polymerization initiator is a radical generator.

9. The planographic printing plate precursor of claim 3, wherein the polymerization initiator is a thermally decomposing radical generator.

10. The planographic printing plate precursor of claim 3, wherein the second layer further contains a co-sensitizer.

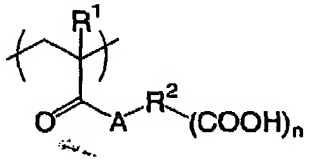
11. A planographic printing plate precursor comprising:

a support; and

an image recording layer which has a two-layer structure including a first layer containing a binder polymer and a second layer containing a binder polymer, a polymerization initiator, a polymerizable compound, and an IR absorber,

wherein the binder polymer in the first layer contains a polymer having a repeating structural unit represented by the following general formula (I):

General formula (I)



wherein R^1 represents a hydrogen atom or a methyl group; R^2 represents an (n+1) valent substituted or unsubstituted hydrocarbon group having an alicyclic structure with 3 to 30 carbon atoms in which one or more carbon atoms of R^2 may be replaced by an oxygen atom or a nitrogen atom; A represents an oxygen atom or a NR^3 group in which R^3 represents a hydrogen atom or a substituted or unsubstituted monovalent hydrocarbon

group having 1 to 10 carbon atoms; and n represents an integer from 1 to 5.

12. The planographic printing plate precursor of claim 11, wherein:

after being exposed with a laser beam, a developing rate of an unexposed portion of the image recording layer by an alkaline developer having a pH of 10 to 13.5 is 100 nm/sec or more, where the developing rate refers to a value obtained by dividing a film thickness (nm) of the image recording layer by an amount of time (sec) required to develop the image recording layer; and

after being exposed with a laser beam, a permeation rate of the alkaline developer to an exposed portion of the image recording layer is 100 nF/sec or less, where the permeation rate refers to a value indicating a rate of change of electrostatic capacity (F) when the image recording layer is formed on a conductive support, and dipped in the developer.

13. The planographic printing plate precursor of claim 11, wherein the binder polymer in the first layer has an alkali soluble group and a hydrophobic group.

14. The planographic printing plate precursor of claim 11, wherein the first layer has a thickness after drying in a range of 0.01 to 1.5 μm.

15. The planographic printing plate precursor of claim 11, wherein the binder polymer in the second layer has a repeating structural unit represented by general formula (I).

16. The planographic printing plate precursor of claim 11, wherein the polymerization initiator is a radical generator.

17. The planographic printing plate precursor of claim 11, wherein the polymerization initiator is a thermally decomposing radical generator.

18. The planographic printing plate precursor of claim 11, wherein the second layer further contains a co-sensitizer.

19. The planographic printing plate precursor of claim 11, wherein the binder polymer in the first layer contains a copolymer containing the repeating structural unit represented by general formula (I) and another copolymer component, and the repeating structural unit represented by general formula (I) is contained in the copolymer in an amount of 1 to 99% by mol based on a total polymer content.

20. The planographic printing plate precursor of claim 11, wherein the binder polymer in the first layer has a molecular

weight of 2,000 to 1,000,000.

21. The planographic printing plate precursor of claim 11, wherein the binder polymer in the first layer has an acid value (meq/g) in a range of 2.00 to 3.60.

22. The planographic printing plate precursor of claim 11, wherein the polymerization initiator is an onium salt.